

Issue Brief

Natural Resources Policy Studies Division

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Funding Long-term Stewardship of DOE Weapons Sites: Tennessee's Perpetual Care Trust Fund

SUMMARY

With technology and budget constraints preventing complete cleanups of waste and contamination at the majority of sites within the nation's nuclear weapons complex, the U.S. Department of Energy (DOE) is relying on institutional controls (e.g., fences, containers, etc.) to protect the public and environment from hazards that may remain far into the future. DOE now has no other option than to fund the upkeep of these institutional controls through annual appropriations—which are subject to shifting priorities and fiscal conditions.

As a result, states and local communities are expected to accept *certain* radioactive and hazardous waste contamination at DOE sites but *uncertain* funds to protect public health and the environment for hundreds to thousands of years. What can states do to ensure long-term funding will be available to protect the public from the remaining radioactive/hazardous waste and contamination?

Tennessee may have an answer with its “perpetual care trust fund,” designed to ensure funding for the long-term stewardship of DOE's low-level radioactive and hazardous waste disposal facility on the Oak Ridge Reservation. To pursue a similar strategy, states would need to:

- determine if a relevant trust fund provision exists in the state's hazardous waste law and, if not, amend the statute to include a perpetual care trust fund;
- utilize the Resource Conservation and Recovery Act (RCRA) Reasonable Service Charge; and
- link state approval of DOE cleanup plans that rely on long-term institutional controls to establishment of a trust fund.

THE ENVIRONMENTAL CHALLENGE

Throughout much of the nuclear weapons complex, technology limitations and budget concerns have favored remediation measures that contain or leave in place some environmental hazards and associated risks, rather than permanently eliminating them. As a result, as many as 129 sites will require institutional controls (e.g., barriers, containers, etc.) to reduce risks to levels that meet federal and state environmental regulations.¹ In the absence of significant technological breakthroughs, these institutional controls will be required for hundreds to thousands of years to protect human health and the environment.

THE POLICY CHALLENGE

Currently, such institutional controls will be funded through the annual appropriations process, even though this process is subject to shifting national priorities and fluctuating fiscal conditions. To many, a future of *certain* radioactive waste and contamination but *uncertain* funding poses too many long-term uncertainties. To address this issue, state regulators, local stakeholders, and Non-Governmental Organizations (NGOs) such as the National Academy of Sciences have called on DOE to establish trust funds at sites where institutional controls will be used.

A SOLUTION CITIZENS CAN TRUST

There is a mountain of precedent for a trust fund solution at DOE sites. Federal and state regulators have long required responsible private-sector parties to establish trust funds or employ similar financial instruments in the context of hazardous waste sites. The tried-and-true policy response is outlined in myriad federal and state environmental laws, including the Resource Conservation and Recovery Act (RCRA) and similar statutes and regulations at the state level.

State regulators also use trust funds to provide financial assurance at radioactive waste disposal facilities. For decades, **Washington** and **South Carolina** have required the operators of commercial low-level radioactive waste facilities to pay a fee (per cubic foot of buried material) into perpetual care accounts administered by their respective state treasurers. The origin of Washington's Perpetual Care and Maintenance Account is particularly noteworthy for what it reveals about the federal government's role in its establishment.

In September 1964, the state leased 1,000 acres of the federally owned Hanford Reservation in eastern Washington from DOE's predecessor agency, the Atomic Energy Commission. A year later, the state carved out a 100-acre tract for the low-level radioactive waste disposal facility. Prior to subleasing the land to California Nuclear, Inc., the state and federal government executed a perpetual care agreement. In the July 1965 agreement, the federal government required Washington to establish a perpetual care fund "to be used exclusively for defraying the costs of insuring perpetual surveillance and maintenance of the Site to the extent required by the terms of any applicable laws, regulations, or licensing for the protection of the public health and safety."² Today, the fund is codified in state regulations as a means of satisfying, among other objectives, "the state's financial responsibilities to the United States government pursuant to the perpetual care agreement executed on July 29, 1965."³

South Carolina's trust fund for the Chem-Nuclear facility in Barnwell County lacks a federal impetus, but is otherwise similar in purpose. As part of the lease agreement between South Carolina and Chem-Nuclear that authorized the company to construct and operate a low-level radioactive waste facility on state lands, Chem-Nuclear was required to pay nearly \$1.8 million into an escrow account. Pursuant to a subsequent lease amendment, the company also makes quarterly payments into the account of \$2.80 per cubic foot of radioactive waste buried after April 15, 1985.

In sum, this brief review of trust funds for hazardous and radioactive waste management reveals a widespread acceptance of the policy tool.

- Federal and state regulators require financial assurance in the context of private sector hazardous waste management.
- State regulators require financial assurance from operators of commercial low-level radioactive waste burial facilities.
- The federal government requires Washington State to facilitate financial assurance (via the perpetual care account) for a commercial radioactive disposal facility located on federal lands.

It is reasonable for states to require DOE to pay into trust funds at sites where long-term hazards will remain following cleanup.

TENNESSEE OPENS THE DOOR

DOE has resisted the use of trust funds at sites in the weapons complex,⁴ invoking an exemption from RCRA financial assurance requirements (see Environmental Protection Agency [EPA] implementing regulations 40 CFR 264.140). And because many states simply adopted language directly from EPA regulations when promulgating their own hazardous waste regulations, DOE has this exemption under most state hazardous waste codes.

However, though exempt from RCRA's financial assurance clause, the federal government does not enjoy the same status with the statute's "Reasonable Service Charge." The reasonable service fee—which authorizes a government agency to charge a responsible party for regulatory services (i.e., oversight, permitting, monitoring) performed—would prove instrumental in Tennessee's precedent-setting perpetual care trust fund agreement with DOE.

TENNESSEE'S STRATEGY EXPLAINED

On October 29, 1999, Tennessee and DOE signed a consent order that requires the federal agency to make payments into a perpetual care trust fund that will be used to cover long-term maintenance and monitoring costs associated with the Oak Ridge Reservation's Environmental Management Waste Management Facility (EMWMF). EMWMF is a disposal cell for hazardous, radioactive, and mixed waste resulting from remedial activities conducted across the Oak Ridge site. Tennessee made the trust fund a condition of the state's approval of the disposal cell and refused to sign the Record of Decision (ROD) required under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) unless DOE consented to the funding arrangement. Under the consent order, DOE must pay \$1 million annually for 14 years into the perpetual care trust fund. The state estimated the \$14 million was sufficient to fund a trust capable of generating interest to cover annual oversight and maintenance costs once the facility was decommissioned in 2014.⁵

TDEC relied on two statutes—one federal, the other state—and a state hazardous waste rule to make its case and provide a framework for administering the perpetual care trust fund.

(1) RCRA’s Reasonable Service Charge

Tennessee used RCRA’s Reasonable Service Charge provisions to compel DOE to make payments to the state for services relating to the disposal facility (e.g., inspection or monitoring). The law stipulates that the government has the authority to charge responsible parties a reasonable fee to cover certain administrative and management costs associated with regulating the responsible party (see box, “RCRA’s Reasonable Service Charge”).

RCRA’s Reasonable Service Charge
<p>...The United States hereby expressly waives any immunity otherwise applicable to the United States with respect to any such substantive or procedural requirement (including, but not limited to, any injunctive relief, administrative order or civil or administrative penalty or fine referred to in the preceding sentence, or Reasonable Service Charge). The Reasonable Service Charges referred to in this subsection include, but are not limited to, fees or charges assessed in connection with the processing and issuance of permits, renewal or permits, amendments to permits, review of plans, studies, and other documents, and inspection and monitoring of facilities, as well as any other nondiscriminatory charges that are assessed in connection with a Federal, State, interstate, or local solid waste or waste regulatory program....</p> <p>Source: Resource Conservation and Recovery Act (RCRA) Section 6001, 42 USCA sec. 6961</p>

(2) Tennessee Hazardous Waste Management Act

Tennessee regulators also relied on the state’s Hazardous Waste Management Act, which authorizes regulators to require responsible parties to pay into a perpetual care trust fund “if there is a reasonable probability that a permitted facility or site will eventually cease to operate while containing, storing, or otherwise treating hazardous wastes on the premises which will require continuing and perpetual care or surveillance...” This payment toward perpetual care can be required “in addition to the any other financial assurance or fee” required under state law and it exists independently of RCRA’s financial assurance provisions.

(3) Tennessee Hazardous Waste Rules

Tennessee’s Hazardous Waste Management rules adopt the financial assurance language found in the federal RCRA rules—including that which exempts the federal government. However, the state’s rules explicitly do not extend the federal exemption to provisions relating to the state’s perpetual care trust fund. They empower the state to “require the posting of financial assurance or the payment of a disposal fee for the perpetual care of the facility.”

Tennessee's Hazardous Waste Management Act

In the event it is determined that there is a reasonable probability that a permitted facility or site will eventually cease to operate while containing, storing, or otherwise treating hazardous wastes on the premises which will require continuing and perpetual care or surveillance over the facility or site to protect the public health, safety or welfare, the commissioner, for the commissioner's respective area of permitting authority, may require for storage, treatment or disposal facilities, a sum to be deposited by the applicant, in addition to the posted bond, in such amounts and under such circumstances as the commissioner shall determine as necessary by rule, regulation, or order based upon such rule or regulation, in a trust fund maintained as the **perpetual care trust fund** in the name of the state. In establishing such additional requirements, the commissioner shall give due consideration to the nature of the hazardous waste material, the size and type of facility or site to be decommissioned, and the anticipated expenses of perpetual care and surveillance (*emphasis added*). Source: Tennessee's Hazardous Waste Management Act , TCA 68-212-108

Tennessee's innovative approach is a workable short-run solution for states that want greater financial certainty when signing off on cleanup decisions that call for long-term institutional controls. States may want to consider a similar approach as they explore how to create a stronger trust fund solution at their DOE site(s). The following challenges deserve attention.

Challenge #1: Costly Failures

Tennessee's perpetual care trust fund provides long-term financial support for monitoring and maintenance. It is not equipped to handle the costs of a massive failure or even major replacements.

Possible Solution

A possible solution is for states to require the DOE to supplement any trust funds with an insurance policy. The insurance policy—established with a private-sector insurance company—would provide additional funding should institutional controls fail. Under such an arrangement, liability would remain with DOE and the federal government would serve as “backstop” should the insurance company fail to pay.

Challenge #2: Partial Coverage

The trust fund applies to only one operable unit on the massive Oak Ridge Reservation. The amount of money is insignificant compared to the federal government's larger fiscal obligation at the Tennessee site.

Possible Solution

States may consider negotiating a sitewide trust fund account. New cleanup decisions at any operable units on the site that call for long-term institutional controls should specify payments into the trust fund. Perhaps using the ROD 5 year review process, the state should renegotiate existing cleanup decisions to include this stipulation.

Challenge #3: Stopped Payments

DOE is providing the corpus of the fund through annual payments over a 14 year period. These payments could be stopped.

Possible Solution

States might explore whether vehicles other than RCRA's Reasonable Service Charge could finance the trust fund. For example, states might consider legislation that requires DOE to pay a lump sum into a trust fund, analogous to a severance fee, when signing agreements that call for long-term institutional controls.⁶

Challenge #4: Legal Uncertainties

Although DOE has not challenged the approach in a court of law, the agency does reserve several legal objections and could ultimately test these in court.

Possible Solution

States might consider collectively approaching DOE to resolve outstanding legal issues now, including whether changes in federal law are necessary to support the widespread use of trust fund solutions at DOE sites.

Resolving these challenges will take time, during which important cleanup decisions will continue to be made. Many of these decisions will require institutional controls to protect human health and the environment over the long run. Each of these RODs are an opportunity to not only apply the Tennessee approach but to also explore potential solutions to its shortcomings.

CONCLUSION

To pursue a strategy that is similar to Tennessee's approach, governor's policy staff, the head of the environmental agency, or the attorney general should take the following steps.

(1) Determine if a relevant trust fund provision exists in the state's hazardous waste law. If not, amend the statute to include a perpetual care trust fund.

Check state hazardous waste laws to see if responsible parties are required to pay into a perpetual care account or equivalent to cover post-closure costs at hazardous waste facilities. This law can provide the statutory basis for an account to be established at the state level to receive DOE payments.

If a relevant provision does not exist in state statutes, the state should consider amending its hazardous waste law to specify that responsible parties are required to pay into a perpetual care trust fund if long-term stewardship will be necessary at their site(s).

(2) Utilize the Resource Conservation and Recovery Act (RCRA) Reasonable Service Charge.

Following guidance in RCRA's Reasonable Service Charge provision, quantify the costs of monitoring and maintenance activities at specific areas/facilities that will require long-term care at the DOE site. RCRA's Reasonable Service Charge provision authorizes agencies to require responsible parties to make payments for services—such as permitting and monitoring—performed in connection with a hazardous waste facility. Monies received through the Reasonable Service Charge

can be used to fund the corpus of a perpetual care account that will finance these activities over the long run.

(3) Link state approval of DOE cleanup plans that rely on long-term institutional controls to establishment of a trust fund.

For all cleanup projects involving operable units that will require long-term care, check to see when a ROD is expected. Prior to signing any RODs that call for long-term institutional controls, negotiate reasonable service fees and enter into a perpetual care agreement with DOE.

¹ At 34 sites, DOE has already concluded its cleanup phase and is now performing LTS tasks such as maintenance and monitoring of remaining waste and contamination. By 2006, the department would like to transition an additional 33 sites, and portions of 29 additional sites from active cleanup to LTS status. In short, by 2006, the department plans to terminate active cleanup activities at all or portions of 96 sites and rely on LTS measures to protect the public and environment from the remaining hazards. (U.S. DOE, *A Report to Congress on Long-Term Stewardship*, DOE/EM-0563, January 2001, p. 2-4ff.)

² Perpetual Care Agreement, July 29, 1965 p. 1

³ Washington Administrative Code, Chapter 173-44, “Fees—Radioactive Waste Management Facilities,” §173-44-010 (updated 8/03/83).

⁴ Carl Bauer and Katherine N. Probst, *Long-Term Stewardship of Contaminated Sites: Trust Funds as Mechanisms for Financing and Oversight*, Resources for the Future, Washington, D.C., December 2000, p. 29. The authors summarize the protracted negotiations between the DOE and Tennessee. DOE officials have reiterated, and generalized, this resistance in recent public discussions.

⁵ Tennessee’s trust fund is not a “site-wide” account; it is associated only with the ROD for this facility.

⁶ Arjun Makhijani of the Institute for Energy and Environmental Research has advocated the use of a “severance payment” for this purpose.